



Courtesy of HT Consultants

Photograph 1

Enlarged view of the forward fracture faces on the left Centre Frame Rear Cluster Fitting after solvent cleaning. Separation had resulted from a very high cycle tension fatigue mechanism that had initiated along the edge marked 1. A secondary initiation was present in the area marked 2. Overload tearing had started in the area marked 3 which led to the final separation.



Photograph 4

Courtesy of HT Consultants

Non approved welded patch repair to the right Centre Frame
Rear Cluster Fitting of G-BPPY

Models 269A, TH-55A, A-1, B & C - Appx B

Table B-1. DAILY INSPECTION - BEFORE FIRST FLIGHT OF THE DAY

NOTE

Refer to the applicable Lycoming Operator's and Maintenance Manuals listed in Related Publications and Directives table (Basic HMI, Section 2) for detailed requirements on daily inspection of the engine.

When unusual local conditions (environment, utilization, etc.) dictate, it is the prerogative and responsibility of the helicopter operator or owner to increase the extent and/or frequency of inspection to promote safe operation.

Inspections in this table are grouped by location so that inspection can be performed on an area-by-area basis. Thus, inspection of the entire helicopter may be accomplished by starting at the front and working in counterclockwise progression to completion.

What to Inspect (Power OFF)

FRONT - Canopy and Pilot's Compartment

1. Remove all tie downs and covers if installed.
2. Canopy and front exterior for obvious damage; windshields for condition and cleanliness.
3. Canopy attachment areas for condition and security.
4. OAT sunshield for obstructions, condition and security.
5. Pitot tube cover removed and pitot tube for obstructions. Drain hole clear.
6. VHF Antenna for condition and security.
7. Side and lower forward fairing and air induction system for condition, security and obstructions.
8. Filter housing lock pin for damage and security. Daily cleaning of filter required in some aircraft operations (Basic HMI, Section 2).
9. Door window for condition.
10. Door vent for operation, condition and security. Rotational tab stop in place.
11. Door latch for operation, condition and security.
12. Door hinge pins and door stops for operation and security.
13. Canopy slat for obvious damage and cracks; slat attachment hardware and canopy attachment areas for condition and security.
14. Fire extinguisher for condition and security.
15. Loose equipment (in pilots compartment) for proper stowage.

INITIALS

Reissued: 20 May 1993

2-3

Table B-1. DAILY INSPECTION - BEFORE FIRST FLIGHT OF THE DAY

What to Inspect (*Power OFF*)

LEFT SIDE - Firing Assembly, Engine Components, and Landing Gear (con't.)

- 13. Impeller for evidence of contact with shroud. Impeller attach bolts for evidence of looseness or working. Weight ring to impeller rivets for working or looseness (no contact or working allowed).
- 14. Visible portions of tail rotor control linkage for security and obvious damage.
- 15. Landing gear stabilizer for security and obvious damage.
- 16. Drag strut for condition and security.
- 17. Visually inspect attachment lugs for tailboom support strut on BSC aft cluster fittings (fittings with thin lugs - 0.070 to 0.100 inch) for cracks or damage. Dye penetrant inspect fittings if cracking is suspected.
- 18. Landing skid for obvious damage and security. With assistance, rock helicopter back and inspect bottom of skid tube for wear.

INITIALS

WARNING

GROUND RESONANCE CAN RESULT IF THE HELICOPTER IS OPERATED WHEN THE LANDING GEAR DAMPER EXTENSION, OIL TYPE AND/OR OIL TO AIR PROPORTIONS ARE INCORRECT.

- 19. (269A/TH-55A, 269A-1 and 269B only) Inspect forward landing gear damper for extension (1-inch minimum or use extension check tool), security, damage and leaks. Aft damper for extension (3/8-inch minimum or use extension check tool), security, damage and leaks.
- 20. (269C only) With fuel tank(s) full, inspect landing gear dampers for condition by observing stance of helicopter. Check damper extension (HMI, Configuration Supplement C, Section 12) if helicopter is nose down or unusually nose up. (Normal stance is slightly nose up.) Visually check dampers for leakage; replace if leakage is obvious or extension is not within limits (HMI, Configuration Supplement C, Section 12).
- 21. Rear ski 1 strut for security and obvious damage, freedom of swivel joints.
- 22. Aft crossbeam for damage, security and excessive bending (One inch maximum allowed with no weight on gear, Basic HMI, Section 12).

Table B-1. DAILY INSPECTION - BEFORE FIRST FLIGHT OF THE DAY

What to Inspect (*Power OFF*) con't.

LEFT SIDE - Pulley Assembly, Fuel Tank, and Main Rotor System (con't.)

- | | |
|---|----------|
| <p>10. Main rotor mast for security; mast support tubes for security and evidence of cracks at welds.</p> <p>11. Lower control rods and belleranks for wear and security; mast bellerank support lugs for evidence of cracks in radius.</p> <p>12. Flight control rods, rod ends, bearings and stationary swashplate scissors link assembly, for wear, damage and security.</p> | INITIALS |
|---|----------|

WARNING

INCORRECT PHASING AND TORQUE ADJUSTMENT, AS WELL AS IMPROPER SERVICING OF THE MAIN ROTOR BLADE DAMPERS CAN LEAD TO CONDITIONS THAT MAY RESULT IN GROUND RESONANCE AND DESTRUCTION OF THE HELICOPTER. FOLLOW ALL INSTRUCTIONS IN THE BASIC HMI CAREFULLY TO ENSURE SAFE HELICOPTER OPERATION.

13. Main rotor blade friction dampers (if installed) for position and oil level; refill as required. Field-clean and service if roughness is noticed. Check phasing and rephase as necessary (Basic HMI, Section 8).

CAUTION

Excessive lead-lag loads applied to the main rotor blades during ground handling can result in damage to the elastomeric damper and failure of the damper assembly. Operators and maintenance personnel should exercise caution to avoid lead-lag loads in excess of 35 lbs. at the tip of the main rotor blades.

14. Visually check elastomeric dampers (if installed) for cracks in elastomer or in elastomer-to-metal bond at end face of damper. Inspect damper turnbuckle, jamnuts and safetywire for security, corrosion and cracks. Inspect clevis bushing for wear and looseness. Inspect bearing in rotor blade at damper attachment for looseness around outer race. (No bearing end play is permitted when manually tested.)
15. Swashplate assembly, rotating scissors link assembly and upper control rods for wear, damage and security.

CAUTION

If installed, use care to prevent damage to or bending of trailing edge tabs on main rotor blades.

16. Visually inspect three main rotor blades for cleanliness, trailing edges and blade tips for condition. Inspect upper and lower surfaces for cracks and bond separation at root fittings and doublers. Inspect upper and lower surfaces for dents, scratches, corrosion and hardware security. Inspect vent hole for obstruction. (Basic HMI Section 8 and/or Supplement C, Section 8.)

Table B-1. DAILY INSPECTION - BEFORE FIRST FLIGHT OF THE DAY

What to Inspect (*Power OFF*) con't.

Stabilizer, Tail Rotor Transmission, and Tail Rotor Assembly	
<ol style="list-style-type: none"> 1. Check drive shaft aft coupling nut lockwire for security. 2. Tail rotor transmission for excessive oil leakage, security of mounting and correct oil level (service if low). 3. Tail rotor blades, hub, and pitch control linkage for free movement, obvious damage, wear and security. Rubber stop or nylon bumper for condition. 4. Visually inspect each tail rotor blade abrasion strip for paint cracking or chipping along the abrasion strip to airfoil bond line. If cracking or chipping is observed, inspect for bond separation with 10X magnifying glass. Perform abrasion strip tap test. If bonding defects are suspected but not confirmed, inspect tail rotor blade in accordance with HMI, Appendix C, Part VII. 5. Check conical bearings for evidence of reddish fretting products. If found, check for looseness and repair (HMI, Appendix C, Part VII). 	<p>INITIALS</p>
<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">NOTE</div> <p>Feathering the blades of a static LTS tail rotor can produce a loud snapping noise as the strap pack is twisted and bent without a centrifugal load imposed. Such a noise is not harmful and of no concern.</p>	
<ol style="list-style-type: none"> 6. Tail rotor control rod at gearbox, and pitch control links at rotor for excessive bearing looseness, free movement and security. Tail rotor control rod for clearance, bellcrank for damage, swasbplate for freedom and boots for condition. 7. Horizontal stabilizer for condition and security. Check for cracks in all attachment mounts and castings, skins and rear spar close out; corrosion, loose rivets and other damage. 8. Tail light and wires for condition and security. 9. Tail skid for looseness in socket, damage and security. 	

RIGHT SIDE - Tailboom and Vertical Stabilizer	
<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">NOTE</div> <p>Misalignment of the marks indicates torsional windup damage to the tail rotor drive shaft. If misalignment is evident, remove drive shaft and perform additional inspections in accordance with Basic HMI, Section 10.</p>	
<ol style="list-style-type: none"> 1. Place aft grease fitting on tail rotor drive shaft in center of inspection hole in tail rotor gearbox adapter; check for misalignment of marks at forward tail boom fitting and forward end of drive shaft which is indicative of tail rotor driveshaft torsional damage. 	<p>INITIALS</p>

Table B-1. DAILY INSPECTION - BEFORE FIRST FLIGHT OF THE DAY

What to Inspect (*Power OFF*) con't.

RIGHT SIDE - Fuel Tank, Clutch Assembly, V-belts, and Pulleys (con't.)	
<ol style="list-style-type: none"> 6. Inspect idler pulley for smooth operation. Try to move pulley at right angles (laterally) to shaft to determine that no perceptible lateral play exists. Spin pulley through several quick rotations; listen and feel for evidence of noisy or rough bearings. Check support bracket for evidence of cracks (pay special attention to areas of bracket adjacent to clutch shaft and bearing retainers). Check support castings for evidence of cracks. Determine that a minimum axial (fore and aft) play of 0.030-inch exists with up to 15 pounds of axial load applied. (If obsolete 269AS444 series or 269ASS15 dual arm pulley assembly is installed, check for 0.002-inch axial play with up to 10 pounds of axial load applied. Visually check idler pulley bearings for corrosion, wear, and damage. See N-85.3, N-90.1, and N-95). 7. Clutch control spring assembly for condition and security. Clutch cable for wear or fraying. 8. Clutch linear actuator attachment lug and mating frame fitting strap for bending, cracks, physical stress, strain or other defects. 9. Cable guide pulley for condition and security; pulley mount straps for cracks. 10. Visually inspect attachment lugs for tailboom support strut on BSC aft cluster fittings (fittings with thin lugs - 0.070 to 0.100 inch) for cracks or damage. Dye penetrant inspect fitting if cracking is suspected. 	<p>INITIALS</p>
RIGHT SIDE - Landing Gear, Engine Components, and Fairing	
<ol style="list-style-type: none"> 1. Aft crossbeam for attachment and security. 2. Rear skid strut for security and obvious damage; freedom of swivel joint. 3. Landing gear stabilizers for security and obvious damage. 4. Drag strut for security and condition. 5. Landing skid for obvious damage and security. With assistant, rock helicopter back and inspect bottom of tube. 	<p>INITIALS</p>
<div style="border: 1px solid black; padding: 2px; display: inline-block; margin: 10px auto; width: 200px;">WARNING</div> <p style="text-align: center; margin-top: 10px;">GROUND RESONANCE CAN RESULT IF THE HELICOPTER IS OPERATED WHEN LANDING GEAR DAMPER EXTENSION, OIL TYPE, AND/OR OIL TO AIR PROPORTIONS ARE INCORRECT.</p>	
<ol style="list-style-type: none"> 6. (269A/TH-55A, 269A-1 and 269B only) Inspect forward landing gear dampers for extension (1-inch minimum or use extension check tool), security, damage and leaks. Aft damper for extension (3/8-inch minimum or use extension check tool), security, damage and leaks. 	<p>INITIALS</p>

Table B-1. DAILY INSPECTION - BEFORE FIRST FLIGHT OF THE DAY

What to Inspect (*Power ON*)

1. Turn BAT switch to ON position, and check the following:

- (a) Exterior lighting (landing, position and anticollision lights) for proper operation; switches OFF after check.
- (b) Interior lighting (panel lights) and communication equipment for proper operation; all switches OFF after check.

CAUTION

Exercise care when trimming the cyclic stick on 269 series helicopters. Operators should avoid continued trimming against a mechanical stop. Proper trimming practices will help prevent damage to the trim control assembly.

- (c) Cyclic trim control for proper operation.
- (d) Instruments for normal indication with engine off.
- (e) Exhaust heater blower fan (if installed) for proper operation; circuit breaker OFF after check.
- (f) Engage clutch control switch. Check alignment of clutch spring compression marks. Release clutch switch.
- (g) Fuel tank shutoff valve open (control knob full in).

CAUTION

Do not run fuel boost pump with fuel shutoff valve closed.

- (b) Turn fuel boost switch ON. Drain fuel filter. Turn fuel boost switch OFF.

2. Turn BAT switch to OFF position.

INITIALS

- A10 Cabin Area
- Check - flying and engine controls for full and free movement in the correct sense; friction devices for correct operation
Check - instrument readings are consistent with ambient conditions
Perform manual override and disengagement check on auto-stabiliser system
Check - avionic equipment operation, using self-test facilities where provided
Inspect seats, belts harnesses for satisfactory condition, locking and release
Check - emergency equipment properly stowed and inspection dates valid
Test operation of electrical circuits
Inspect - cabin and baggage doors for damage, security and for correct operation and locking.
Check that markings and placards are legible,
- A11 Agricultural Operations
- Inspect - hopper, hopper lid, tank, pump, boom assemblies, pipe runs, blowers and spreaders for damage and security
Check - emergency dump doors, fan brake and pump control for correct operation
- NOTE: At the conclusion of agricultural operations the helicopter shall be completely cleaned to remove chemicals, and an inspection of those parts of the structure which are likely to have been contaminated, eg skin/covering and exposed control cables, shall be carried out before the helicopter is returned to any work other than agricultural operations
- A12 Marine Helicopters
- Inspect - floats, spreaders, struts, bracing wires for damage, security and corrosion
Check fixed float inflation pressures
- A13 Special Purpose Equipment
- Inspect - emergency flotation gear, lifting hooks, rescue hoists, stretcher installations and similar equipment for damage and security.
Check - lifting hook release operation

PART 1 OWNER'S AND OPERATOR'S RESPONSIBILITIES**1 INTRODUCTION**

- 1.1 An aircraft registered in the United Kingdom in respect of which a Certificate of Airworthiness (C of A) is in force shall not fly unless the aircraft (including its engines), together with its equipment and radio station, is maintained in accordance with a maintenance schedule approved by the CAA. The Light Aircraft Maintenance Schedule (LAMS) has been approved by the CAA for this purpose.

Owners/Operators are responsible for ensuring that their aircraft are maintained in accordance with the requirements of the CAA Approved Maintenance Schedule, at the intervals prescribed therein, otherwise the C of A ceases to be in force.

- 1.2 Approved maintenance requirements and therefore maintenance costs, vary between C of A and operational categories. It follows that Owner/Operators should ensure that the C of A and operational category for their aircraft is that which is appropriate to its particular operation.

2 MAINTENANCE MANAGEMENT : NON-COMMERCIAL AIR TRANSPORTATION

- 2.1 Owners/Operators are reminded that they are the maintenance managers of their aircraft and that they must make suitable arrangements for all continuing airworthiness requirements to be met. They should also understand that if they fail to do so, then, apart from any airworthiness hazards that may result, they could also incur unnecessary expense at the time of the Star Inspection. It is appreciated that not all Owner/Operators of aircraft would consider themselves competent to meet this responsibility themselves, in which case they are recommended to delegate the task to a licensed aircraft maintenance engineer or maintenance organisation of their choice (both hereafter referred to as 'maintenance organisation').

The CAA is of the opinion that Owner/Operators should enter into a suitable contract with a maintenance organisation which is mutually acceptable and on-going. This arrangement is likely to produce the most cost effective maintenance and C of A renewals consistent with an acceptable level of safety. Clearly, if the aircraft is taken from one maintenance organisation to another, there must be an element of added work involved in the new maintenance organisation becoming familiar with the particular aircraft.

The contract should address the following matters:

- (a) *General arrangements* for technical liaison between Owner/Operator and the maintenance organisation.
- (b) *Accomplishment of maintenance* at the approved locations of the maintenance organisation or provision of suitable accommodation at other locations.
- (c) *Provision of appropriately licensed aircraft maintenance engineers and non-licensed personnel* sufficient in numbers for the completion and certification of scheduled maintenance, rectification of defects and completion of duplicate inspections.

- (d) Assessment of Service Information made by aircraft, engine, propeller and component type design organisations, in the form of Service Bulletins, Letters, etc, as appropriate to the aircraft and its operation.
- (e) Incorporation of modifications.

3.2 Owners/Operators must appreciate that a maintenance organisation cannot carry out work or certify inspections without their instructions or agreement, and it follows that they should be quite specific when making known their work requirements to the maintenance organisation. Difficulties regularly occur because there is a misunderstanding between Owner/Operators and the maintenance organisation as to the former's requirements.

The written contract should clearly define what scope for action is allowed the maintenance organisation without prior consultation, and what tasks require the Owner/Operators agreement.

Whenever an aircraft is presented for scheduled or unscheduled maintenance it is essential that a precise indication is given of the work required and of all defects known to exist on the aircraft, plus any additional work required to be carried out.

- NOTES:
- 1 If the Owner or Operator of a Transport or Aerial Work Category aircraft elects to have his routine maintenance accomplished by a licensed aircraft maintenance engineer it will nevertheless be necessary for him to present the aircraft to a suitably approved organisation for completion of Annual checks and Star Inspections.
 - 2 Private Category aircraft must be presented to a suitably approved organisation for completion of the Annual Check associated with renewal of the Certificate of Airworthiness (Star Inspection).
 - 3 A suitably approved organisation in this context is one approved to the requirement of BCAR Section A, Chapter A8-15, commonly known as an M3 approved organisation.

3.3 Difficulties have also occurred where Owner/Operators fail to provide the maintenance organisation with the Log Books for the aircraft at the time the work is initiated, or provides Log Books that have not been kept up to date so as to reflect the current maintenance and operating status of the aircraft, engines and propellers.

In addition to the Log Books, the maintenance organisation must be provided with the LAMS and CAP 543 Time Limited Task and Component Change Record for the particular aircraft before any scheduled maintenance work can be started. The full maintenance history is a prerequisite for completion and certification of a Certificate of Maintenance Review (CMR).

3.4 Provision is made in LAMS Section 6 for the period between certain calendar controlled tasks to be varied (permitted variations) for maintenance planning reasons, provided that airworthiness is not impaired, but only on the authority of a person who is an acceptable signatory for the prescribed Check. Permitted variations for tasks controlled by flying hours however, should not be understood to be a maintenance planning tool, but as an exceptional means to allow Owner/Operators to fly for a limited period of time until the required maintenance is performed.

Owners/Operators who take advantage of permitted variations must ensure that the Log Books are endorsed accordingly by the authorised person at the time the permitted variation is granted. (See Part 3 Para 7)

CIVIL AVIATION AUTHORITY

Safety Regulation Group

AIRCRAFT SURVEY REPORT

REGISTRATION: G-ARLX TYPE: HUGHES 269C SERIAL NO: 900041

DATE OF SURVEY: 28 October 1999 AIRCRAFT LOCATION: Biggin Hill.

OPERATORS AOC NO: _____ OPERATORS NAME: _____

MAINTENANCE ORG. APP NO: _____ MAINTENANCE ORG. NAME: _____

Status During Survey: Hangar Ramp Issue / Renewal / Export / In-Service / Accident Survey*

Documents sampled: C of A C of R AFM W/B Tech. Log ADD W/Pk

ATA Zones

Lower half of fuselage	200	Upper half of fuselage	300	Empennage	400	Powerplants and struts
500 Left wing	600	Right wing	700	Landing Gear	800	Doors

Survey sample

Zone	ATA	Actions	Defect Description
1	<u>200</u>	<u>62/10</u>	<u>1</u> <u>4</u> Air intake fwd clamp disconnected.
2	<u>200</u>	<u>56/00</u>	<u>4</u>
3	<u>300</u>	<u>64/10</u>	<u>4</u> <u>6</u> Compass swing required, last swing 24.08.96.
4	<u>400</u>	<u>85/10</u>	<u>1</u>
5	<u>100</u>	<u>11/00</u>	<u>4</u> <u>1</u> Main rotor blades installed are PTN ^o 269A1185M-5TC. The flight manual supplement is missing from the flight manual. These rotor blades are approved for installation under AAN 23220
	<u>200</u>	<u>34/40</u>	<u>1</u>
7			
8			
9			
10			

Survey Actions: 1 = Before Flight 2 = Carried Forward [Hangar] 3 = ADD [Ramp] 4 = Nil

Suitability of facilities for work in progress: Yes No / N/A * Person(s) contacted: _____

Areas not listed have not been sampled. All findings have been notified in writing to operators representative.

Survey carried out by: (Name) Signature: Office Code:

Accepted by: _____ on behalf of the maintenance organisation

NOTE: Group all inspections by locations so that inspection can be performed on an area-by-area basis. Accomplish inspection of the entire helicopter by starting at the front and working in counterclockwise progression.

Refer to HMI for complete inspection criteria (Appendix B, Tables B1 through B3).

Section IV
NORMAL PROCEDURES

4-1. PREFLIGHT REQUIREMENTS

- Have a thorough understanding of operating limitations. (Refer to Section II.)
- Service the helicopter as required. (Refer to Aircraft Handling, Servicing and Maintenance, Section VII.)
- Determine that the helicopter loading is within limits. Refer to Section II and VI
- Check the helicopter performance data. Refer to Sections V, VI and VIII.
- Determine that a Daily Inspection (in accordance with the Handbook of Maintenance Instructions (HMI)) has been accomplished within 24 hours prior to the first flight of each day.
- Perform a pilot's preflight inspection prior to each flight.

NOTE: Refer to the applicable Lycoming Operator's and Maintenance Manuals listed in Related Publications and Directives table, Section II, Basic HMI for detailed requirements on daily inspection of the engine.

It is the prerogative and responsibility of the helicopter operator or owner to increase the extent and/or frequency of inspection to promote safe operation when unusual local conditions (environment, utilization, etc.) dictate.

4-2. PILOT'S PREFLIGHT INSPECTION

- Visually check the following items for wear, general condition and obvious damage. Damage is defined as any condition that is not normal or not within limits. Examples of conditions to look for are: inoperable equipment, excessive leakage, discoloration due to heat, dents, cracks, punctures, abrasion, chaffing, galling, nicks and evidence of corrosion. These are the most common types of damage; however, do not limit inspection to the above conditions.
- Perform further inspection prior to the next flight if discrepancies are noted to determine if the rotorcraft is airworthy.
- Flight is prohibited when unrepaired damage exists which makes the rotorcraft unairworthy.

WARNING

GROUND RESONANCE MAY RESULT IF HELICOPTER IS OPERATED WHEN THE LANDING GEAR DAMPERS ARE NOT IN GOOD OPERATING CONDITION. (REFER TO HMI CONFIGURATION SUPPLEMENT C, SECTION 12 FOR DETAILED INSPECTIONS.)

- Left navigation light and strobe for damage or looseness CHECK
 - ENGINE - LEFT SIDE ③**
 - Engine oil level CHECK
 - Engine sump plug CHECK
 - Engine and components, exhaust and intake tubes, fuel and oil lines CHECK
 - Alternator drive belt and belt tension CHECK
 - Engine lower coupling shaft CHECK
 - Fore and aft movement CHECK
 - Using a flashlight (or equivalent), inspect exterior of boot for cracking, fraying, chips, and deterioration. If any damage is observed, replace boot prior to next flight.
 - Audibly inspect lower coupling drive shaft for adequate lubrication as follows:
 - Grasp lower pulley AFT spacer and rotate coupling shaft back and forth to take up backlash in both directions (CW and CCW). Listen for hard metal-to-metal contact noise between gear teeth. If any metal-to-metal contact noise is heard, lower coupling drive shaft and engine adapter must be removed and inspected in accordance with Basic HMI, Section 10 prior to further flight.
 - Engine impeller (any indication of looseness) CHECK
 - Belt drive lower H-frame tie bar bracket and strut for cracks and security CHECK
 - Aft crossbeam CHECK
 - Battery INSPECT
-
- Rear oleo damper extension CHECK
- CAUTION**
- IF CRACKING OF CLUSTER FITTINGS IS SUSPECTED DYE PENETRANT INSPECT IN ACCORDANCE WITH SERVICE INFORMATION NOTICE N-82.3 BEFORE FLIGHT.**
- Center frame aft cluster fittings for cracks, deformation, or damage CHECK
- MAIN ROTOR SYSTEM ④**
- Main rotor transmission and mast CHECK
 - Main transmission oil level CHECK
 - Blades and rotor head CHECK
 - Main rotor dampers CHECK
 - Main rotor swashplate, pitch links, upper and lower bearings CHECK
 - Main rotor mixer bellcrank CHECK
 - Main rotor control rods CHECK
 - Tail rotor shaft, set alignment marks CHECK
- TAILBOOM LEFT SIDE ⑤**
- Tailboom for damage or dents CHECK
 - Tailboom supports and fittings - for cracks, deformation, damage, looseness and security CHECK
 - Beacon light CHECK
 - Static port clear of obstructions CHECK
 - Tailboom support strut end fitting for cracks, deformation, or damage CHECK
 - Exhaust diffuser installation (if installed) for cracks, deformation, damage, looseness and security. CHECK

- Ground handling wheel (if installed) in up position with quick-release pin installed
CHECK
- Ground handling wheel handle (if installed); quick-release pin installed
CHECK
- Tail rotor control cable
CHECK

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3 EXTERIOR CHECK

Starting on the LH side check:

- | | | |
|---|--|--|
| a) Induction system and fairing | n) Rear oleo damper extension | bb) Clutch control cable |
| b) Front crossbeam | o) Engine lower coupling shaft - no end play | cc) Main fuel tank - visual check of contents |
| c) Landing gear skid tube | p) Aft crossbeam | dd) Main fuel tank - drain sump & inspect fuel sample |
| d) Front oleo damper extension | q) Battery | ee) Rear oleo damper extension |
| e) Position light | r) Main rotor transmission and mast (oil level with gearbox dip stick) | ff) Engine components, exhaust and intake tubes |
| f) Door | s) Rotor head, control rods, blades and dampers | gg) Fuel low point - drain & inspect fuel sample (fuel must be on) |
| g) Canopy slat | t) Tail rotor shaft - set alignment marks - no metal to metal contact in end float | hh) Landing gear skid tube |
| h) Engine oil - check cap secure | u) Tailboom, supports and fittings | ii) Front oleo damper extension |
| i) Engine sump plug - wired | v) Anti-collision beacon light | jj) Position light |
| j) Engine components, exhaust and intake tubes | w) Tail rotor shaft alignment | kk) Door |
| k) Alternator belt tension | x) Tail rotor assembly, oil level, push pull rod and tail skid | ll) Canopy slat |
| l) Auxiliary fuel tank - visual check of contents | y) Horizontal stabiliser, vertical fin and tail light | mm) Canopy |
| m) Auxiliary fuel tank - drain sump & inspect fuel sample | z) Tail rotor control cable | nn) Landing light |
| n) Auxiliary fuel tank - drain sump & inspect fuel sample | aa) Tail drive system (idle pulley) | oo) Pitot tube |
| | | pp) Front aerial |

Copy of the locally produced Pilot's Check List Pre Flight Inspection

SAFETY REGULATION GROUP

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CIVIL AVIATION
AUTHORITY

Our ref 9/97/CtAw/115

17 March 2000

**LETTER TO OWNERS/OPERATORS NO
SCHWEIZER (HUGHES) 269A, 269A-1, 269B, 269C AND 269C-1 SERIES HELICOPTERS
FAILURE OF TAILBOOM FITTING ATTACHMENT LUG**

An early finding from the Air Accidents Investigation Branch investigation of a fatal accident to a Schweizer 269 helicopter has revealed the failure of a Fitting Attachment Lug (for tailboom support strut) on the Cluster Fitting Part No 269A2234 (see Service Notice N220). The failure was due to an in-service weld repair having been carried out on the Fitting Attachment Lug, although further metallurgical investigations are being carried out.

As a result of this finding and in anticipation of possible mandatory action, the CAA recommends owners/operators of Schweizer 269 Series helicopters, to instigate a one-time visual inspection carried out by an appropriately licensed aircraft maintenance engineer. This visual inspection should cover the Centre Frame Rear Cluster Fittings, the Tailboom Support Fitting, the Support Struts and the Centre Attachment Fitting and look for evidence of any in-service weld repairs. Any parts having in-service weld repairs should be assessed for compliance with the appropriate Schweizer Service Information. It is also recommended that this inspection and assessment be certified in the aircraft log book.

To assist the CAA regarding possible mandatory action, would you please report all findings to Mr D A Marsh, Deputy Regional Manager, Civil Aviation Authority, Safety Regulation Group, Ground Floor, Consort House, Consort Way, Horley, Surrey RH6 7AF (Tel No 01293 828223, Fax No 01293 824014).

Enquiries regarding this LTO should also be referred to Mr D A Marsh.

R J TEW

Applications and Certification Section

(i) Remove the strut assemblies, P/N 269A2015 or P/N 269A2015-5.

(ii) Visually inspect the strut aluminum end fittings for deformation or damage and dye-penetrant inspect the strut aluminum end fittings for a crack in with accordance Step II of Schweizer Service Information Notice No. N-109.2, dated September 1, 1976 (SIN N-109.2).

(iii) If deformation, damage, or a crack is found, before further flight, modify the strut assemblies by replacing the aluminum end fittings with stainless steel end fittings, P/N 269A2017-3 and -5, and attach bolts in accordance with Step III of SIN N-109.2; or replace each strut assembly P/N 269A2015 with P/N 269A2015-9, and replace each strut assembly P/N 269A2015-5 with P/N 269A2015-11.

(2) Within 500 hours TIS or one year, whichever occurs first, modify or replace the strut assemblies in accordance with paragraph (b)(1)(iii) of this AD.

(c) For Schweizer Aircraft Corporation Model 269C helicopters, within 100 hours TIS, serialize each strut assembly, P/N 269A2015-5 and 269A2015-11, in accordance with Schweizer Service Information Notice No. N-108, dated May 21, 1973.

(d) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, New York Aircraft Certification Office (NYACO), FAA. Operators shall submit their requests through an FAA Principal Maintenance Inspector, who may concur or comment and then send it to the Manager, NYACO.

Note 2: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the NYACO.

(e) Special flight permits may be issued in accordance with 14 CFR 21.197 and 21.199 to operate the helicopter to a location where the requirements of this AD can be accomplished.

(f) The inspections and modifications shall be done in accordance with Steps II and III of Schweizer Service Information Notice No. N-109.2, dated September 1, 1976 and Schweizer Service Information Notice No. N-108, dated May 21, 1973, as applicable. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from Schweizer Aircraft Corporation, P.O. Box 147, Elmira, New York 14902. Copies may be inspected at the FAA, Office of the Regional Counsel, Southwest Region, 2601 Meacham Blvd., Room 663, Fort Worth, Texas; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

(g) This amendment becomes effective on May 8, 2002, to all persons except those persons to whom it was made immediately effective by Emergency AD

B-278
06 Sep 2002

SCHWEIZER SERVICE BULLETIN

MANDATORY

MANDATORY

MANDATORY

SUBJECT: 269A2234 BSC AND 269A2235 BSC AFT CLUSTER FITTING MODIFICATION

MODELS AFFECTED: 269A, TH-55A, A-1, B & C Helicopters Equipped with 269A2234 BSC and 269A2235 BSC Aft Cluster Fittings

NOTE

Helicopters equipped with 269A2234-3 and 269A2235-3 (thick lug) aft Cluster Fittings are not subject to this Service Bulletin, Refer to the Basic HMI Section 13 to distinguish between these fitting types if necessary.

TIME OF COMPLIANCE: • Within the next 400 hours time in service or within 2 years from issue date of this Service Bulletin, whichever occurs first.

REFERENCE: 269A, TH-55A, A-1, B & C Basic HMI; revised 26 Oct 2001.

PREFACE: Schweizer Aircraft Corp. has developed an FAA approved Aft Cluster Fitting Modification Kit (P/N SA-269K-106-1) that is considered an alternate means of compliance for the 50 hour repetitive dye penetrant inspection mandated by AD 2001-25-52 for the 269A2234 BSC and 269A 2235 BSC (thin lug) aft cluster fittings. This kit contains instructions for modification of both 269A2234BSC / 269A2235BSC fittings.

FAA Approval: This Service Bulletin (revision "New") is approved by the Manager, New York Aircraft Certification Office, by letter dated September 06, 2002, as an Alternate Method of Compliance with AD 2001-25-52; paragraph (a).

PROCEDURE:

- a. (1) Perform aft cluster fitting inspection mandated by AD 2001-25-52. Replace fittings that are found unacceptable (Basic HMI, Section 13).
- (2) If fittings meet the requirements of the AD, Install SA-269K-106-1 Kit in accordance with instructions on the SA-269K-106 Kit drawing.
- b. Record compliance with Service Bulletin in the aircraft records.

WEIGHT AND BALANCE

Weight and balance are not affected.